



Kristy Colling, Ph.D.

Scientist | Human Factors
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Professional Profile

Dr. Colling specializes in the study of human performance, with an emphasis on highly trained users. Her areas of expertise are attention, perception, information processing, and motor control in routine skilled behaviors, often colloquially referred to as “muscle memory.” She has an experimental background investigating how conscious attention to, and nonconscious processing of, visual and tactile information affect performance, as well the source of errors in these domains. She has over ten years of experience with human subjects’ experimental design, data collection, and analysis. Dr. Colling also has experience in the market research domain designing, developing, and analyzing both qualitative and quantitative data derived from questionnaires and focus groups. At Exponent, she utilizes her skillset to assess human factors in pedestrian and transportation accidents and injuries, consumer product use, communication of risk and compliance with warnings, consumer decision making, and product development.

Prior to joining Exponent, Dr. Colling graduated from Vanderbilt University with a Ph.D. in Psychology. Her research focused on many topics related to automated behaviors. A related line of investigation focused on how the motor plans that dictate the individual movements of an automated action are controlled. These studies addressed the many errors possible in skilled sequential actions, such as transpositions, omissions, insertions, and replacements.

Academic Credentials & Professional Honors

Ph.D., Psychology, Vanderbilt University, 2018

M.S., Psychology, University of Memphis, 2010

B.A., Psychology, University of Memphis, 2007

Prior Experience

Post-Doctoral Fellow Applied Neuroscience, Integrated Neuroscience Services, 2020-2021

Associate Director of Research, C3 Research, 2019

Post-Doctoral Fellow, University of Central Florida, 2018

Senior Research Associate, Princeton University, 2016-2017

Publications

Snyder, K. M., Logan, G. D., & Yamaguchi, M. Watch what you type: The role of visual feedback from the screen and hands in skilled typewriting. *Attention, Perception, & Psychophysics* 2015; 77; 282-292.

Snyder, K. M., & Logan, G. D. (2014) The problem of serial order in skilled typing. *Journal of Experimental Psychology: Human Perception and Performance* 2014; 4; 1697-1717.

Snyder, K. M., Ashitaka, Y., Shimada, H., Ulrich, J. E., & Logan, G. D. What skilled typists don't know about the QWERTY keyboard. *Attention, Perception, & Psychophysics* 2014; 7; 162-171.

Snyder, K. M., & Logan, G. D. Monitoring-induced disruption in skilled typewriting. *Journal of Experimental Psychology: Human Perception and Performance* 2013; 39; 1409-1420.

Tapp, K. M., & Logan, G. D. Attention to the hands disrupts skilled typewriting: The role of vision in producing the disruption. *Attention, Perception, & Psychophysics* 2011; 73; 2379-2383.

Snyder-Tapp, K., & Dale, R. Dynamic competition and the cognitive bottleneck. In N. Taatgen & H. van Rijn (Eds.), *Proceedings of the 31st Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. 2009

Dale, R., Roche, J., Snyder, K., & McCall, R. Exploring action dynamics as an index of paired-associate learning. *PLoS ONE* 2008; 3(3): e1728. doi:10.1371/journal.pone.0001728

Presentations

Snyder, K. M., & Logan, G. D. Positional Priming Effects in Rapid Action Sequences. Poster presented at the 54th Annual Meeting of the Psychonomic Society, Toronto, Ontario, Canada, 2013.

Snyder, K. M., & Logan, G. D. How well do Skilled Typists know the QWERTY Keyboard? Poster presented at the 53rd Annual Meeting of the Psychonomic Society, Minneapolis, MN, 2012.

Tapp, K., & Logan, G. Explicit Monitoring of Implicit Details Disrupts Skilled Typewriting. Poster presented at the 52nd Annual Meeting of the Psychonomic Society, Seattle, WA, 2011.

Snyder-Tapp, K., & Dale, R. Dynamic Dual-Task Cognitive Control. Poster presented at the 17th Annual Object Perception, Attention, & Memory Conference, Boston, MA, 2009.

Snyder-Tapp, K., & Dale, R. Dynamic Competition and the Cognitive Bottleneck. Poster presented at the 31st Annual Meeting of the Cognitive Science Society, Amsterdam, The Netherlands, 2009.

Peer Reviewer

Memory & Cognition

Journal of Cognitive Neuroscience